WHAT IS CLAIMED IS:

1. A method for maintaining a consistent pressure between two chambers in a processing facility, wherein the two chambers have a slit valve there between, the method comprising the steps of:

determining when the slit valve is open;

measuring a pressure of the first chamber while the slit valve is open;

measuring a pressure of the second chamber while the slit valve is open;

calibrating first and second pressure sensors, associated with the first and second chambers, respectively, relative to each other while the slit valve is open; and

closing the slit valve when the pressure sensors have been calibrated relative to each other.

2. The method of claim 1 wherein the slit valve is a vacuum-sealed door.

3. The method of claim 1 wherein the calibrating is performed by changing a reading value of the first pressure sensor to be in accordance with the second pressure sensor.

4. The method of claim 3 wherein the second chamber is a transfer chamber connecting the first chamber to a third chamber.

5. The method of claim 3 further comprising:

monitoring the change of the reading value of the first sensor; and

determining if the change indicates a faulty system.

6. A method for maintaining a consistent pressure in a processing facility having a transfer chamber used to transfer materials to and from a process chamber, wherein the two chambers have a valve there between, the method comprising the steps of:

determining when the valve is open;

measuring a pressure of the transfer chamber while the valve is open;

measuring a pressure of the processing chamber while the valve is open;

calibrating a pressure sensor on the processing chamber relative to a pressure sensor on the transfer chamber while the valve is open; and

closing the valve when the pressure sensors on the processing chamber and transfer chamber are relatively calibrated.

7. The method of claim 6 wherein the transfer chamber is also used to transfer materials to and from a loading chamber, the transfer chamber and loading chamber having a second valve there between, the method further comprising:

determining when the second valve is open;

measuring a pressure of the transfer chamber while the second valve is open;

measuring a pressure of the loading chamber while the second valve is open;

calibrating a pressure sensor on the loading chamber relative to the pressure sensor on the transfer chamber while the second valve is open; and

closing the second valve when the pressure sensors on the loading chamber and transfer chamber are relatively calibrated.

8. An automated system for controlling processing of a product in a processing facility, said system compromising:

first, second, and third chambers;

first, second, and third pressure sensors associated with the first, second, and third chambers, respectively, for measuring a pressure inside each chamber;

first, second, and third exhaust lines connected to the first, second, and third chamber, respectively;

first, second, and third pressure restriction control valves connected to the first, second, and third exhaust lines, respectively;

a first material transfer valve connecting the first chamber to the second chamber;

a second material transfer valve connecting the second chamber to the third chamber

a control module connected to the first and second material transfer valves, the first, second and third pressure sensors, the first, second and third variable restriction control valves, and the first, second and third chambers, the control module including processing capabilities for performing the steps of:

measuring the pressure in the first and second chamber while the first material transfer valve is closed;

adjusting the first and second variable restriction control valves until the first and second pressure sensors have similar readings while the first material transfer valve is closed; and

calibrating the first pressure sensor to generate a reading similar to that of the second pressure sensor when the first material transfer valve is open.

9. The system described in claim 8 wherein the first and second material transfer valves are vacuum-sealed doors.

10. The system described in claim 8 wherein the transfer chamber includes a robot for handling of the materials being processed.

11. The system described in claim 8 wherein the control module also includes processing capabilities for:

detecting a fault in the system by monitoring the adjustment of the first pressure sensor over a period of adjustments.

12. The system described in claim 8 wherein the control module also includes processing capabilities for:

measuring the pressure in the second and third chambers while the second material transfer valve is closed;

adjusting the second and third variable restriction control valves until the second and third pressure sensors have similar readings while the second material transfer valve is closed; and

calibrating the third pressure sensor attached to the third chamber to generate a reading similar to that of the second pressure sensor when the second material transfer valve is open.

13. The system described in claim 12 wherein the control module also includes processing capabilities for:

detecting a fault in the system by monitoring the adjustment of the first, second, and third pressure sensors over a period of adjustments.

14. The system described in claim 13 wherein the control module also includes processing capabilities for:

determining that the fault is associated with the third chamber if only the third sensor requires significant adjustment over the period of adjustments.

15. The system described in claim 13 wherein the control module also includes processing capabilities for:

determining that the fault is associated with the second chamber if both the first and third sensors require significant adjustment over the period of adjustments.